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Attachment A

King County
Automated Fingerprint Identification System (AFIS)

2000 Levy Options and Costs

Report to the King County Executive

By the:

King County Automated Fingerprint Identification System
Oversight Committee

April 21, 2000

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I. Executive Summary

The King County Regional Automated Fingerprint Identification System (AFIS) is a levy-funded service, managed by the King County Sheriff's Office (KCSO), that provides computer analysis of fingerprints taken from individuals and crime scene evidence. AFIS searches those prints against a database of more than 430,000 fingerprints of known individuals. Fingerprints in the database are obtained from individuals by police agencies and at the King County Correctional Facility, the Regional Justice Center, the Juvenile Detention Center, Work and Education Release and the North Rehabilitation Facility. Latent fingerprints are obtained from crime scenes by police officers and by AFIS Latent Print Examiners, who are called at the request of the investigating police agency. Those fingerprints are processed using sophisticated techniques and compared with known individuals using the King County Regional AFIS computer databases and other regional and national fingerprint databases.

The system has evolved from one that was very narrowly focused on purchase and implementation of the first King County Regional AFIS computer to one that provides comprehensive fingerprint services to police agencies serving King County's incorporated cities and unincorporated areas.

With the current levy set to expire at the end of 2000, the King County Executive and the AFIS Advisory Committee created the AFIS 2000 Subcommittee, with city and county management, police and corrections representatives, to conduct a review of the AFIS program and recommend options for maintenance and improvement of the system during the next levy period. The AFIS Advisory Committee guided the work of the AFIS 2000 Subcommittee and submits this report.

King County Regional AFIS is regarded as one of the premier systems in the country, with latent "hit rates" approximately double the national average. King County Regional AFIS has achieved one of the highest rates of success in identifying crime suspects and determining the true identity of persons with outstanding criminal warrants who otherwise would have been released on aliases. This success has been largely due to the quality and comprehensiveness of its database.

King County Regional AFIS is currently in the process of implementing threshold change in service, through recent installation of the most current generation AFIS mainframe and operating system, and through implementation later this year of Live Scan remote electronic fingerprinting and transmission. Implementation of the AFIS upgrade and Live Scan was anticipated to begin during the second half of the current levy period. However, both were delayed by Washington State definition of electronic print transmission standards and while the vendor addressed Year 2000 computer issues. The AFIS 21 computer upgrade was completed during the last half of 1999, underwent reliability testing during the first quarter of 2000 and is now fully operational and conditionally accepted. Implementation of Live Scan, beginning late in 2000 will provide levels of access and service well beyond that possible today for detention centers,

police agencies and other remote users.

King County Regional AFIS has been funded by a voter-approved levy since its inception in 1987. The levy was modified and re-approved in 1990 and again in 1995. This is the final year of the current five-year levy.

First Levy: 2.5 cents per $1,000 assessed valuation (AV) -- Revenue from the first levy was used to purchase and implement the initial AFIS computer system and provided for very minimal staffing to run the computer and process prints. During the 1987-1990 levy period, the value of AFIS was proven as a crime-fighting tool, by matching 1,208 crime scene prints with suspects and by determining the true identities of individuals who gave alias names to avoid being held in jail on outstanding warrants. However, with this initial success, problems and gaps in service were also apparent. Just 60 percent of persons booked into the King County jail were fingerprinted, creating the potential that inmates with outstanding warrants who lied about their identities would be released. Support for law enforcement investigations was compromised by long turnaround times for processing crime scene prints and lack of 24-hour staffing for identifying inmates booked into jail.

Second Levy: 2 cents per $1,000 AV -- In preparation for the 1991-1995 levy it was determined that significant staffing would be required to process inmate and crime scene prints in a more timely manner to make more effective use of the AFIS computer's capabilities. With increased staff, progress and success quickly followed. Nearly 100 percent of persons booked at the King County jail were fingerprinted and identified in an average of five hours. Analysis of crime scene fingerprints was completed on average between 30 and 45 days, down significantly from the first levy. The quality of fingerprints submitted to AFIS, and the resultant identification rate, was significantly improved through:

- establishment of the AFIS print taking unit at the King County Jail
- more than 500 hours of training for suburban police agencies in AFIS capabilities and techniques for lifting crime scene prints

These improvements resulted in catching more than 3,399 "liars" booked into jail and identifying 4,003 crime scene prints during the levy period.

Third Levy: 6.65 cents per $1,000 AV -- As with the first levy, the successes of the second levy masked significant gaps and problems in provision of AFIS services. The Technical Committee charged with making recommendations for the 1996-2000 levy looked behind the statistics and identified many concerns, including:

Need to capture additional prints: Many juvenile offenders were not fingerprinted. Similarly, many persons convicted of driving under the influence of alcohol or controlled substances were not printed. With the 1997 opening of the Regional Justice Center in Kent, additional staff would be needed.

Crime Scene Prints: There remained significant barriers to police agencies using AFIS services for identifying potential suspects from crime scene fingerprints. Lengthy

processing times for crime scene prints discouraged police from lifting prints and submitting them to AFIS. Additional training for officers was needed to improve the quality of prints submitted from crime scenes.

Investment in Technology: The computer initially purchased for AFIS was anticipated to become obsolete, and it was expected that replacement of the computer and operating system would be needed during the latter years of the levy period. The Levy Committee recommended purchase of Live Scan technology for remote electronic taking and searching of fingerprints. This Live Scan technology, coupled with "store and forward" capability anticipated with the AFIS 21 upgrade was expected to reduce duplication of effort.

Funding Levels: The Technical Committee found that the AFIS system was underfunded even at the existing staffing levels, requiring subsidy by both King County and Seattle.

Access and Service for Suburban Police Agencies: The Committee determined that a concerted effort should be made to increase access and service for Suburban police agencies through increased training, establishment of a technology "grants" fund, reimbursement for suburban jail print taking, and establishment of a Regional AFIS Advisory Committee.

The County Council ultimately placed before the voters a proposal that included funding to address the above issues as shown in Table 2 on Page 15.

The AFIS proposal was approved in the November 1995 election with a 73 percent "yes" vote.

The agenda for improvement of the AFIS system during this levy period was an ambitious one, and one that has stretched the system to the limits of its resources. In retrospect it is clear that some of the timelines for technology implementation may have been overly optimistic, and were delayed by events and decisions outside the AFIS Program's control. Nevertheless, a great number of the goals have been realized, and the rest should be realized by the end of this year.

1. Proposal for a Fourth Levy

In January 2000, the Regional AFIS Advisory Committee formed the AFIS 2000 Subcommittee to analyze the status of King County Regional AFIS and develop options for the AFIS Advisory Committee's consideration. The AFIS 2000 Subcommittee had representation from King County, Seattle, Suburban Cities and Bellevue. The Subcommittee met weekly from January 6 through April 17. The AFIS Advisory Committee held four working sessions with AFIS 2000 Subcommittee Staff during that period. In addition, Committee staff briefed the Regional Law, Safety and Justice Committee on January 27, the King County Police Chief's Association on January 12 and April 13, the general membership of the Suburban Cities Association on January 12, and held a workshop for Suburban Cities Elected Officials on March 21.

The Subcommittee established a Status Quo cost of services, that is the continuation of services at the levels funded for 2000. Staff analyzed workload expected from

implementation of potential new technology, normal increases in service demand, as well as staffing and technology required to close gaps in service.

The Subcommittee explored options for the levy period ranging from a five-year levy to a permanent levy. The Subcommittee sought advice from the King County Assessor regarding what changes should be assumed for calculation of revenues from lid lift property tax levies from those in effect in 1995. The King County Assessor and the King County economist were consulted to set assumptions for assessed valuation, new construction, and rate calculations.

The AFIS Advisory Committee believes that the most viable option would be another five-year levy, subject to restrictions on annual rates of growth as required by Initiative 695. Although the courts have yet to determine what exact effect on property tax measures are required by the Initiative, the Committee recommends an approach in line with Initiative 695 be followed. Using this approach, the rate would be set at an initial level, which would be expected to drop gradually during the course of the levy period. The amount of the drop in rate would be determined by the previous year's yield and the amount of new construction added the previous year to the total Assessed Valuation.

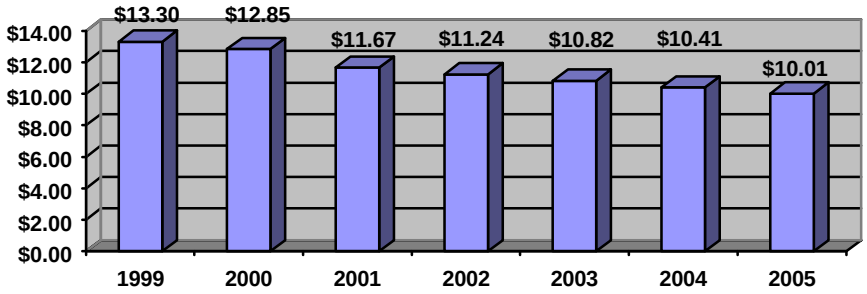
The AFIS Advisory Committee considered the information developed by the subcommittee and recommends the following:

- Continuation of Status Quo Services (five-year total cost of $50,249,711)
- Staffing additions to handle low range estimates of increased workload (five-year total of $2,359,822 and 11 new positions)
- Completion of Live Scan implementation by purchasing and implementing an additional seven units beyond the 22 funded for 2000 (one time costs of $498,400).
- Establishment of print taking at Juvenile Court for juvenile offenders who are never booked into detention. (five-year total cost of $557,677 and two new positions)
- A target ending fund balance of $800,000

Table 1, Estimate of 2001-2005 Levy Expenditures and Rate Impact

Item	Five Year Total	2001 Levy Rate / cents per $1,000	2005 Levy Rate / cents per $1,000
Status Quo Services	$50,249,711	5.357	4.594
Additional 7 Live-Scan Units	$498,400	0.058	0.050
Juvenile Court Print Taking	$557,677	0.062	0.053
Workload Driven Additions	$2,359,822	0.269	0.231
Target Fund Balance	$800,000	0.090	0.077
Total	$54,465,610	5.836	5.005

Figure 1, Cost for Owner of Home with $200,000 Assessed Value



While the AFIS Advisory Committee believes a five-year levy is the most appropriate funding mechanism at this time, it urges King County, the Cities and State to establish a process and work collaboratively during the coming years to provide permanent funding for King County Regional AFIS. Committee members believe AFIS is a vital regional public safety service that should not be jeopardized by the potential failure of a property tax measure. Accordingly, the members also are concerned that any potential permanent funding source be sufficient to support true regional service delivery.

II. Introduction

At the end of this year, the five-year levy that funds the operation of the King County Regional Automated Fingerprint Identification System (AFIS) will expire. This levy was adopted at the rate of 6.650 cents per $1,000 of assessed valuation, is currently assessed at a rate of 6.430 cents per $1,000 assessed valuation, and is applied to all taxable property in King County. This report serves as a basis for elected officials to review AFIS services and consider approaches to a levy that could be presented to the voters in the fall of this year. The upcoming levy presents an opportunity not only to continue the accomplishments of this system but also to make incremental enhancements to this effective crime investigation tool.

After a review of the history and accomplishments of AFIS in King County, this report contains an assessment of the strengths and weaknesses of the current operations. Following this assessment, the report includes recommendations for a mission statement and operations objectives for the next five years. Based on the mission and goals, a series of options and associated costs are presented. Finally, the report includes recommendations for a levy proposal.

The contents of this document are a product of the AFIS 2000 Subcommittee of the Regional AFIS Advisory Committee. The Subcommittee is composed of law enforcement practitioners, managers, policy staff and analysts, representing the King County Sheriff's Office, Seattle Police Department, Bellevue Police Department, suburban city law enforcement agencies, the Suburban Cities Association, King County Council Central Staff, King County Information and Telecommunication Services, King County Office of the Executive, and King County Office of Budget.

The Regional AFIS Advisory Committee is a regional committee created as a result of passage of the 1995 AFIS Levy. The AFIS 2000 Subcommittee met weekly for a number of months to review current AFIS operations and to develop options for the upcoming levy. The Subcommittee made regular reports to the Regional AFIS Committee, and briefed the Suburban Cities Association, the King County Police Chiefs Association and the Regional Law, Safety and Justice Committee.

Please refer to Appendix A for a list of the AFIS 2000 Subcommittee and Regional AFIS Committee members.

A. What is AFIS

Fundamentally, AFIS is a tool used by law enforcement agencies to solve crimes. Specifically, AFIS is a computer system that includes a database of fingerprints, and related equipment employed by trained staff for capturing, storing, and comparing fingerprints. It has evolved into a critical part of the criminal justice system. In particular, it fulfills several key roles:

- **Quick identification of persons booked into jail** – These detained persons often use aliases, particularly when there are outstanding warrants. The goal is to verify

the identification of these persons before they are released. Unidentified persons (i.e., John Does), either in-custody or deceased, are identified in the same manner.

- **Reporting of criminal history information to the Washington State Patrol and Federal Bureau of Investigation** – The State is the repository for criminal history information. Local law enforcement agencies are required to send two fingerprint cards and associated charge information to the State.

- **Supporting crime scene investigations** – Fingerprints lifted from the crime scene are called latent prints. Many times these prints are crucial to identifying suspects and assist in convicting criminals.

In support of these roles, the King County and Seattle AFIS staff are organized into three units: Jail Identification (King County only), Ten Print Processing, and Latent Processing. As is evident from the review below, despite the computerization of much of the fingerprint process, the process remains labor intensive, requiring skilled and dedicated staff.

1. Central Site and King County Regional AFIS Management

The King County Regional AFIS Program consists of an automated fingerprint identification system database and archive system housed at a central site within the Technical Services Division of the King County Sheriff's Office and remote sites at the Seattle Police Department (SPD) and Bellevue Police Department.

The King County Regional AFIS Manager oversees the management of all operations within the AFIS Section. This Section provides services to the King County Sheriff's Office, its contract cities, and the suburban jurisdictions within the county. The manager is responsible for serving as a liaison to external criminal justice entities, executing contractual agreements with vendors for regional services, project management of complex technical projects, and preparing budgets for the AFIS Section.

The Seattle Police Department AFIS remote site is managed by the SPD Identification and Photo Lab Manager. This manager is responsible for serving as the SPD liaison to KC Regional AFIS and the Regional AFIS Advisory Committee, for participating on committees relating to contracts with vendors for regional services relating to AFIS, preparing and monitoring the SPD AFIS budget, and managing the SPD Identification and Photo Lab Unit.

2. Jail Identification Unit

Using the traditional ink method, this unit rolls fingerprints onto cards (also called Ten-Prints) and also provides palm print cards of persons booked into the King County's adult and juvenile detention facilities. This unit also takes the mug shots that are stored on a computer photo imaging system.

The staff in this unit includes identification technicians, administrative specialists, and two supervisors. They staff the booking area of the King County Jail and the Regional Justice Center 24 hours per day, seven days per week, and obtain fingerprints from the Juvenile Detention, the North Rehabilitation Facility, and Work Release. Jail Identification Technicians are also available for special requests and support local agencies and detectives throughout King County for individual fingerprinting services.

3. Ten Print Unit

The Seattle and King County Ten Print Units enter fingerprint cards taken by the Jail Identification Unit and other law enforcement agencies into the King County Regional AFIS database and search them against the existing prints in the system. If a Ten Print staff person finds that the fingerprints are in the database under a different name, he or she notifies the jail and/or other law enforcement agencies. These units also run new prints against the unsolved latent print database (described in the next section), in hopes of solving old crimes. Finally, these units submit the cards with any charge information to Washington State Patrol and the FBI to establish criminal history on each arrestee. Prints taken at the King County Jail are processed on average in less than five hours.

The King County Ten Print Unit is staffed with identification technicians, administrative specialists, and two supervisors. The SPD Ten Print Unit is staffed with Identification Technicians and two supervisors. Both units operate 24 hours per day, seven days per week.

When jail inmates are fingerprinted, their prints are searched through AFIS as soon as possible after booking. After preparing the cards for AFIS entry, the Identification Technician reads them through a scanner and launches a search against a database of over 430,000 fingerprint cards from all police agencies within King County. AFIS uses the unique arrangement of ridge characteristics on a fingerprint to compare it to the known prints on file. The computer then produces a list of possible matches, usually within less than a minute. The Technician verifies any identifications by visually comparing prints. If an inmate is found to be using an alias, the Technician notifies the booking facility. New fingerprint cards added to the database are automatically run against the unsolved latent database, which consists of more than 13,420 unidentified latent prints from previous crimes.

4. Latent Unit

King County Sheriff's Office and SPD AFIS Latent Print Units process latent prints and evidence found at crime scenes with the goal of identifying possible suspects.

Latent Print examiners have specialized skills in locating, visualizing, collecting, preserving, and comparing latent prints. Upon request, latent examiners respond to the scene of serious or violent crimes to assist in gathering latent evidence. In addition to the prints collected directly by latent examiners, officers from federal, county and city police agencies submit prints, which they have obtained from crime scenes and items taken as

evidence. The Latent Print Units are also used to locate and preserve prints from items of evidence. In the laboratories, latent examiners use sophisticated chemicals, photography and laser technology to recover prints.

Latent Examiners divide latent prints into three categories: AFIS quality, suspect comparison, and no value. The latter category refers to prints which in general are not of any use. AFIS quality prints, which consist of the first joint of the finger, can be searched against the latent print database of existing known Ten Prints. The prints also can be compared to AFIS databases at the State and the Western Identification Network (or WIN, which consists of 12 separate databases located throughout the western United States). If no match or "hit" is made, the print remains in the unsolved latent database, so it can be compared to new Ten Print cards. Finally, prints of suspect comparison value can be manually compared to the fingerprint or palm print cards for known suspects.

A print left by chance on an object is called a latent print because it is usually not visible without special processing (powder or chemicals) to reveal it. Even a fragmentary latent print may be identifiable (i.e., have enough legible detail to be positively matched to the person who made it), but the examiner has to know whose prints to compare it to. Because AFIS can compare a single print to thousands of prints on file in a few minutes, it can find possible suspects when none would have been known otherwise. In order to prepare a latent for AFIS, the examiner digitally scans a latent lift or a photograph of a latent into a personal computer and enhances the image by adjusting the properties of the image, such as contrast, color, and density. The examiner traces out ridges including the identifying characteristics using specific graphic functions and makes a printout of the tracing to initiate a search in AFIS. The computer searches the database and produces a list of possible matches, which are checked by the examiner. In the event of a hit, the examiner notifies the detective in charge of the case. Unidentified latent prints are stored in the unsolved latent database.

Every new Ten Print card is run against the unsolved latent database. This results in more than one million new potential matches for these unsolved latents each year. Latent fingerprint examiners must analyze all of the match candidates to determine which prints will result in the solution to unsolved crimes.

B. Mission and Goals

During its 15-year history, AFIS has grown to include not only the traditional focus on supporting criminal investigations but also the acquisition of quality fingerprints and the rapid identification of persons arrested, booked or adjudicated for adult and juvenile offenses. More recently, AFIS has strengthened its ties to suburban law enforcement agencies. In addition, with the advances in technology, the future holds great promise for more sophisticated integration with other local criminal justice systems and with state and national AFIS systems. The progression of AFIS shows that its mission must be dynamic to meet these emerging demands and opportunities. The following mission statement captures these themes.

Proposed Mission Statement

To provide timely, efficient, and quality fingerprint identification services in support of local criminal investigations through a county-wide system linked to state and national fingerprint and criminal history databases.

As noted in the previous section, there are gaps and inconsistencies in the current provision of AFIS services. This assessment indicates there are potential opportunities in the next levy to improve AFIS services beyond the tremendous value it currently provides law enforcement in King County. The following goals were adopted for the 1996-2000 levy. We believe these goals and objectives should be readopted for the next levy period.

Goals

I. ***Obtain the highest quality fingerprints for the AFIS database***

The success of the AFIS is directly related to the quality of the fingerprints in the AFIS database. Continuing the high quality of prints is an essential goal.

II. ***Capture as many prints as legally permissible in the AFIS database***

The success of AFIS is largely dependent upon developing a comprehensive database of fingerprints. Consequently, it is a goal to capture to the extent feasible the fingerprints for all persons arrested, detained, and/or convicted. Juvenile prints are particularly important given that a large percentage of the latent matches come from juvenile prints residing in the King County Regional AFIS database.

III. ***Support timely identification of individuals (adult and juvenile)***

Experience has shown that repeat offenders frequently use an alias. Timely identification is critical to avoid releasing a person with other serious matters pending. Maintaining and shortening the time needed to identify inmates remains a goal.

IV. ***Provide training for KCSO, Seattle Police Department, and suburban police to take Ten Prints and lift crime scene (latent) prints with the highest possible quality***

For most cases, police officers and local technicians will be responsible for gathering evidence, including latent fingerprints, at crime scenes. A worthwhile investment is to continue to provide these staff with appropriate training on how

AFIS operates and the techniques in taking ten prints and lifting crime scene prints.

V. ***Increase awareness of AFIS to the criminal justice community***

Similar to training, it is important that police officers and their command staff understand the available AFIS services and how these services can assist them in identifying suspects and solving crimes. Moreover, this outreach should occur regularly to ensure that local law enforcement personnel learn about the latest performance and capabilities of the AFIS operations.

VI. ***Improve ease of access for local law enforcement agencies to AFIS***

Through improved business protocols and emerging technology, police officers from any jurisdiction in King County should be able to transmit fingerprint searches easily and quickly to AFIS.

VII. ***Support criminal investigations/dramatically reduce the turnaround time for processing latent prints***

One of the fundamental purposes of AFIS is to aid police agencies in solving crimes. The most important goal, which directly supports this mission, is to reduce the time it takes to begin and complete latent print analysis. Police will not use AFIS if the results take so long that the usefulness is diminished. The current time for case completion to court readiness is 15-30 days.

VIII. ***Support electronic arrest reporting from the originating agency throughout the system***

A long term goal for managing criminal justice information is to report relevant information once and share this information electronically with other agencies which require it for their operations. Specifically, the goal is to have police record information at arrest which will electronically be transferred to the jail, AFIS, prosecutor, courts, and Washington State Patrol.

IX. ***Support consistent, complete, accurate and non-duplicative criminal history reporting***

A further extension of the previous goal is to support protocols and technology which will enable agencies to report criminal history, arrest, and conviction information in an efficient and timely manner. Consistent and complete information would be transmitted to the State in a fashion that eliminates duplicative work and provides quick, complete, and accurate information to all jurisdictions. A number of situations arise in which one jurisdiction is duplicating work of another. Through improved protocols and new technology, this waste of valuable resources should be eliminated or significantly reduced.

X. ***Upgrade AFIS equipment in a manner that is consistent with enhancing links to the Washington State Patrol and Western Identification Network and that supports emerging regional and national standards.***

An essential feature of the current AFIS operation is its connection to the State system and the Western Identification Network (WIN). While cumbersome, this access allows searches on prints extending throughout most of the western United States. Maintaining the ability remains a goal as AFIS equipment is upgraded. Furthermore, emerging technology and standards should serve to enhance these connections.

III. AFIS History and Evolution

A. First AFIS Levy (1987-1990)

In 1986, the voters of King County approved funding of an Automated Fingerprint Identification System (AFIS). King County residents agreed to levy 2.5 cents per $1,000 valuation on taxable property located within the legal boundaries of King County. The focus of this levy was the purchase and maintenance of the AFIS computer equipment. It was determined that the King County Sheriff's Office (KCSO) would house the central site computer equipment. The KCSO AFIS Unit was responsible for searching crime scene latent prints and entering all Ten Print cards received from unincorporated King County and all of the suburban jurisdictions into the AFIS database at the central site. The Seattle Police (SPD) AFIS Unit was responsible for the City of Seattle latent and Ten Print work, which they would enter into the county AFIS central site database through a remote AFIS site located at the Seattle Police Department.

Although all KCSO and SPD Identification Unit staff could use the AFIS equipment, salaries and benefits for only 3 latent print examiners (2 for KCSO and 1 for SPD) were funded through the first levy period.

The primary goal of the first levy was to give all police departments within King County a tool to identify perpetrators of serious crimes by matching fingerprints retrieved from crime scenes to known prints stored in the AFIS database. The system was implemented in April of 1988. In the three remaining years of the levy, KCSO and SPD staff matched 1,208 crime scene latent prints to prints and potential suspect names in the AFIS database. Very few of these latent "hits" would have been made without AFIS.

Actual Case Story: The City of Auburn had been having a rash of commercial burglaries. Over 100 commercial burglaries and 9 months later, one latent print from one commercial burglary was submitted to the KCSO Latent Unit. The latent print was searched against the newly implemented Regional AFIS database, and a match was made to a juvenile fingerprint card. Auburn police officers were notified of the identification. The juvenile was placed under surveillance and that very evening committed a commercial burglary. After being caught in the act, the youth confessed that he had

committed many others. Officers drove to the locations where the over 100 previous commercial burglaries had been committed. 75 of the cases were cleared and of the remaining uncleared cases, the youth couldn't remember if he had burgled the other establishments or not because there had been so many.

During this levy, it was readily apparent that AFIS was a tremendous crime-fighting tool. Problems also became apparent. The first levy assumed that computerization would save staff time. However, the addition of the inked fingerprint cards from suburban jurisdictions increased the KCSO Ten Print Unit's workload 144 percent. No additional staff were funded to deal with this significant backlog. Additionally, it was found that on average, only 60 percent of the King County Department of Adult Detention inmates were being fingerprinted when they were booked into the facility. Because many of these fingerprints were of poor quality, they were degrading the AFIS database.

B. The Second AFIS Levy (1991-1995)

The focus of the second AFIS levy, therefore, became staffing. The goals of the second levy were to:

1) fingerprint all inmates in the King County Jail;
2) determine the identity of all inmates within seven hours of booking to insure that inmates would not be released with outstanding warrants;
3) search all Ten Prints received from the suburban jurisdictions the same day received;
4) maintain a 30-day turnaround from receipt of crime scene latents to AFIS search and reporting of the results; and,
5) increase training of police officers in processing latent prints.

The second AFIS levy was approved by King County voters in the fall of 1990. The rate was lowered from 2.5 cents to 2 cents per $1,000 of assessed valuation of taxable property within the borders of King County. This lower rate was the result of a remaining balance of $3,000,000 from the first levy and the completion of computer equipment purchases in the first levy so that no significant new equipment was required in the second levy.

During this period, the KCSO AFIS Section created a Jail Identification Unit. While the physical location of the Jail ID Unit is in the King County Jail's Intake and Release Area, the staff report to the KCSO AFIS Section. This unit is staffed 24 hours per day, seven days per week. The quality of fingerprints received from this unit has increased the quality of the County AFIS database dramatically.

The KCSO and SPD Ten Print Units were expanded to meet the new workloads, reduce backlogs, and to meet the program objective of identifying all inmates within seven hours of booking. During the first half of this levy period, the KCSO Ten Print Unit was able

to eliminate a backlog of 20,000 fingerprint cards.

The County AFIS Latent Unit's staffing was increased in phases from five to eight latent print examiners during 1992 and 1993. After the new examiners came on board, a nine-month backlog of AFIS-quality latent cases was decreased. A more acceptable turnaround time of 30 days to complete an AFIS-quality latent case to court readiness was finally attained.

However, the last four months of 1994, the Latent Unit experienced a 58 percent increase in crime scene call-outs and a 78 percent increase in the number of hours spent in court. This trend continued into 1995. These significant increases in demand for staff time, coupled with a temporary evidence processing lab site that is five miles from the central AFIS site at the County Courthouse, caused the turnaround time to fluctuate between 30 and 45 days during 1995.

Actual Case Story: The AFIS Jail Identification Unit became a 24-hour, 7-day a week operation in March of 1992. In May of that year, a technician began to fingerprint an inmate. There was a look of shock on the inmate's face as he uttered the words, "Since when did you guys start fingerprinting everybody?" The technician answered, "Since March of this year." The inmate went on to tell the technician that he had been in the King County Jail 10 times before, each time giving a different name, and had never been fingerprinted. He then told the technician his real name. Since 1992 there has been a steady decrease in the number of people found to be lying about their identity. Technicians and officers have been told by inmates that you just can't get away with lying about your name in the King County Jail, because "they" will just find out anyway.

C. Third AFIS Levy (1996-2000)

As with the first levy, the successes of the second levy masked significant gaps and problems in provision of AFIS services. The Technical Committee charged with making recommendations for the 1996-2000 levy looked behind the statistics and identified many concerns, including:

Need to capture additional prints: Many juvenile offenders booked into the Juvenile Detention Center were not fingerprinted. Similarly, persons convicted of driving under the influence of alcohol or controlled substances were not printed if they were booked directly into the North Rehabilitation Center to serve their sentence. With the 1997 opening of the Regional Justice Center in Kent, additional staff would be needed to fingerprint persons booked into the facility on a 24 hour a day, seven days per week.

Crime Scene Prints: There remained significant barriers to police agencies using AFIS services for identifying potential suspects from crime scene fingerprints. Lengthy processing times for crime scene prints discouraged police from taking prints from crime scenes and submitting them to AFIS. Despite the training that occurred during the previous levy, many officers still had not been trained, so many prints submitted were not of AFIS quality.

Investment in Technology: The computer initially purchased for AFIS was expected to become obsolete near the end of the levy period, and it was expected that replacement of the computer and operating system would be needed during the latter years of the levy period. In addition, the Committee recommended purchase of Live Scan technology for remote electronic taking and searching of fingerprints. This Live Scan technology, coupled with "store and forward" capability anticipated in the AFIS 21 upgrade was expected to allow for reduction of duplication that occurred within several aspects of the AFIS services.

Funding Levels: The Technical Committee found that the AFIS system was underfunded even at the existing staffing levels, requiring subsidy by both King County and Seattle.

Access and Service for Suburban Police Agencies: The Committee determined that a concerted effort should be made to increase access and service for Suburban police agencies through increased training, establishment of a technology "grants" fund, reimbursement for suburban jail print taking, and establishment of a Regional AFIS Advisory Committee.

The County Council ultimately placed before the voters a proposal to fund King County Regional AFIS at a rate of 6.65 cents per $1,000 Assessed Valuation. The AFIS package included funding to address all of the above issues as shown in the following table.

Table 2, Estimate of 1996-2000 Levy Expenditures and Rate Impact

Item	5 Year Total Cost	Rate per $1,000 Assessed Valuation
Jail Print Taking (King County Jail, Suburban Jails, RJC)	$7,196,458	1.08 cents
Juvenile Print Taking	$290,163	0.04 cents
Print Persons Reporting to NRF	$203,975	0.03 cents
Training Coordinator/Suburban Liaison Positions	$874,482	0.13 cents
Latent Examiners	$11,314,981	1.69 cents
Supervision	$3,691,609	0.55 cents
10-Print Unit	$11,052,362	1.65 cents
Supplies, Equipment and Maintenance and Operations	$9,307,025	1.41 cents
Sub Total	**$43,931,055**	**6.58 cents**

Additional AFIS Improvements

AFIS Technology Grant Fund	$1,325,000	0.20 cents
Additional Latent Print Examiners	$1,035,023	0.14 cents
Sub Total	**$2,360,023**	**0.34 cents**
Miscellaneous Salary and Benefit Adjustments, and Other Technical Changes	($1,709,489)	-0.27 cents
GRAND TOTAL	**$44,581,589**	**6.65 cents**

IV. The Current State of AFIS

During the past five years King County Regional AFIS has provided increased support for Seattle, King County Sheriff, and suburban police jurisdictions through increased identification of individuals who lie about their identities in an effort to escape service of outstanding warrants and by increased matching of latent crime scene prints with suspects.

Financially the Regional AFIS system is strong, due to prudent management of is resources and higher than expected revenues generated by a consistently strong economy. Actual revenues for the 1996 to 2000 levy period are expected to be $1,875,438 greater than projected. Actual expenditures are expected to be $24,536 less than projected, despite significant unforeseen costs related to Year 2000 systems issues. The AFIS fund is anticipated to close 2000 with approximately $2.4 million in fund balance.

A. King County Regional AFIS Management

1. Staffing

KCSO

1 – Regional AFIS Manager
1 – Administrative Specialist III

1 –Operations Manager/Suburban Liaison[1]
1 – Training Coordinator

SPD

1 – Identification and Photo Lab Manager
1 – Administrative Specialist I

2. Objective / Output

The overall objectives of King County Regional AFIS Management are to:

- Ensure all Units within the KCSO AFIS are meeting their objectives of completing workload in a timely manner, with the utmost quality, accuracy, and service to our customers.
- Review and administer King County Regional AFIS Fingerprint Enhancement and funds under direction of the AFIS Advisory Committee.
- Upgrade the AFIS computer system to Year 2000 compliance.
- Implement Live Scan throughout the County.
- Ensure that all projects meet National Standards.
- Ensure telecommunications and complex network needs are met for the County and State Intergovernmental Networks as well as for the local agencies needs.

[1] Operations Manager/Suburban Liaison, and Training Coordinator positions are funded for 2000 and the hiring process has been initiated.

Output for the King County AFIS Regional AFIS:

- All KCSO and SPD Units met their objectives.
- Negotiated AFIS 21 Upgrade Contract, equipment installed on time, tested, and placed in production for turn of century.
- Worked collaboratively with and connected both Seattle Police and Bellevue Police remote sites to King County Regional AFIS 21 for Year 2000 compliance.
- Negotiated continued Washington State Patrol and Washington Information Network connectivity through old ACOS AFIS system with no maintenance fees after January 1, 2000.
- Continued tracking and correspondence on AFIS 21 project with vendor.
- Wrote and submitted Live Scan Contract drafts to vendor.
- Meeting with vendor for Live Scan Technical System Design.

3. Results

- King County Regional AFIS System is Year 2000 compliant.
- New AFIS 21 system not only has an increased database capacity from 450,000 to 750,000, it has an Archive System which will store the data and fingerprints for every card searched on the system.
- Archive System will store the "best composite card" which features the best fingerprints substituting poorer quality fingers. Our basis to becoming vendor independent in the future.
- Within the AFIS contract negotiated an increase in the Archive Database by 675,000 documents with no additional cost.

B. King County Jail Identification Units

1. Staffing

2 – Jail ID Supervisors
22 - Identification Technicians
2 – Administrative Specialist II

2. Objective / Output

The Jail Identification Unit's primary objective is to obtain 100 percent of the fingerprints from every booking in any King County facility, and to do so with the best quality possible. In 1999 the Jail Identification Unit fingerprinted 67,255 inmates and took 59,567 mug shot photos.

3. Results

The King County Jail ID Units are successfully obtaining virtually 100 percent of all available fingerprints at King County's adult and juvenile detention facilities.

Fingerprints from King County Adult Detention facilities:	Number	Percent
King County Sheriff[2]	21,351	35.59
Seattle Police Department	23,379	38.97
Suburban Police Agencies	15,259	25.44
Total	59,989	100.00

Prints from other King County Facilities

North Rehabilitation Facility	1,817	25.01
Juvenile Detention	5,449	74.99
Total	7,266	100.00

4. Benefits

- Fully trained and dedicated AFIS personnel in both jails have resulted in a much higher quality of fingerprints.

C. Ten Print Identification Units

King County AFIS processes all Ten Print identification cases for King County Sheriff's Office and all suburban police agencies in King County. Seattle Police Department maintains a separate Ten Print **U**nit, which processes Seattle Police and University of Washington Police cases.

1. Staffing

King County AFIS Ten Print Unit

2 – Ten Print Supervisors
12 – Identification Technicians
11 – Administration Specialist IIs
4 – Term Limit Temporary Clerks

Seattle Police Ten Print Unit
2 – Ten Print Supervisors
10 – Identification Technicians
9 – Administrative Specialist I

[2] Includes prints for 13 cities that receive contract police services from the KC Sheriff's Office: Beaux Arts, Burien, Covington, Kenmore, Maple Valley, Newcastle, North Bend, Sammamish, SeaTac, Shoreline, Skykomish, and Woodinville

2. Objective / Output

The objective for both the KCSO and SPD Ten Print Units is to identify inmates within seven hours of booking. It is important to identify these subjects by fingerprints prior to release, so that they can be held responsible for any outstanding warrants obtained in other names previously given at the time of booking.

In 1999, the average time lapse between an inmate being booked and identified by fingerprints by King County was 4.1 hours.

In 1999, the KCSO Ten Print Unit ran 62,331 inquiries and the SPD Ten Print Unit ran 27,965 for a total of 90,267 inquiries on King County Regional AFIS. Of the KCSO inquiries, 44 percent were received from the Suburban Agencies via mail, bookings, and faxed requests.

In addition to the bookings mentioned above, the units run many other types of inquiries and perform a variety of functions. These include:

- receiving and running faxed prints around the clock from police agencies within and outside of King County, some from out of state;
- identifying deceased persons by fingerprints for the Medical Examiners Office.
- searching other AFIS systems in certain instances where a local search is not successful. Other AFIS systems include Washington State Patrol (statewide), and the Western Identification Network (Utah, Montana, Nevada, Wyoming, Alaska, Oregon, Idaho and the Immigration and Naturalization Service.). Additional systems available for search purposes include eight California AFIS databases.

3. Results

In 1999, the KCSO Ten Print Unit had a 76 percent hit rate. The SPD hit rate was 80 percent. It is estimated that 75-80 percent of inmates are repeat offenders.

Of the inmates whose prints were run by KCSO and SPD Ten Print Units, 650 were discovered to be inmates who gave false names (liars).

The number of liars identified by the KCSO AFIS Ten Print Unit has increased 15 percent from 1995 through 1999. Prints submitted by Suburban Police Agencies (Not including Sheriff's Office Contract Cities) accounted for 65 percent of the increase in the number of liars identified by KCSO during that period.

Warrants averaging $1,085,964 per year were served as a result of the work of the KCSO Ten Print Identification Unit. In addition, KCSO Ten Print Identification prevented the potential release of an average of 83 individuals a year with warrants for crimes so serious that no bail amount had been allowed by the issuing judge.

Table 3, Liar Identification by KCSO and SPD Ten Print Units

	1995	1996	1997	1998	1999	5-Year Total
Liars from Jails[3]	623	624	677	556	650	3130
Liars from Suburbs[4]	202	309	263	239	255	1268
Totals	825	933	940	795	905	4398

Warrants Served as a result of Liar Identification[5]

	1995	1996	1997	1998	1999	5-Year Total
Warrant Amounts	$ 427,754	$ 927,093	$ 1,536,905	$ 1,166,969	$ 1,371,098	$ 5,429,819
Number with No Bail	45	65	86	113	104	413

4. Benefits

Due to the success of King County Regional AFIS, inmates who give false names in order to evade outstanding warrants are being held responsible for paying their warrants. More importantly, many of these liars are detained in jail for felony and wants/warrants, often with a "no bail" option. If the identification process did not occur prior to the release of inmates, a felon could post bail on a misdemeanor charge and be released before the felony warrant/want was discovered. Once a subject is released, he or she may continue to elude officers indefinitely.

By notifying Washington State Patrol and FBI of an individual's charges and aliases, information is added to an individual's criminal history or rap sheet. The information is then available to law enforcement agencies and courts throughout the nation, and to the public in cases of conviction information. This increases the public's awareness of an individual who may be investigated for criminal acts or for employment background purposes.

The addition of Live Scan technology will make "real time" notification possible. As the inmate is booked into the jail and fingerprinted, the KCSO and SPD Ten Print Units will immediately receive these electronically captured prints to identify and eventually forward onto the State and FBI. King County detention facilities, as well as certain precincts, suburban agency jails, and booking facilities will enjoy significantly improved response times to inmate identification.

[3] Includes KCSO, SPD and Suburban Police Agencies

[4] Received by FAX or mail

[5] Does not include SPD Warrants

D. King County Sheriff and Seattle Latent Print Units

The King County Regional AFIS Latent Unit processes all crime scene print cases for King County and all other agencies except Seattle. Seattle Police Department maintains a separate Latent Print unit, which has direct access to the King County Regional AFIS computer for processing Seattle Police and University of Washington Police cases.

1. Staffing

King County Regional AFIS Latent Print Unit

1 -- Supervisor
1 -- Lead Latent Print Examiner
13 -- Latent Print Examiners
1 -- Clerical supervisor
1 -- Administrative Specialist III
2 -- Administrative Specialist II
2 -- Administrative Specialist I
1 -- Supported Employee

Seattle Latent Print Unit

1 -- Latent Print Supervisor
10 -- Latent Print Examiners
2 -- Administrative Specialist I

2. Objective / Output

The objective of the Latent Units is to process and search all AFIS quality latent prints through the system and to report to the detective the results within 30 days. In 1999 the King County Latent Unit beat this objective with a turnaround time of three weeks.

In 1999, the KCSO Latent Lab received 5,364 incoming cases:

- 3,788 King County cases
- 1,576 Other Agency cases
- Searched 2,956 latent inquiries in the King County Regional AFIS system
- Sent 2,836 latent inquiries to other systems.

SPD Latent Lab received 3,559 incoming cases:

- Searched 2,025 latent inquiries in the King County Regional AFIS system
- Sent 214 latent inquiries to other systems

The units identified 925 AFIS quality latent prints:

- 389 for King County (including Sheriff's Office Contract Cities)
- 219 for Seattle Police
- 319 for other agencies

The labs also processed:

- 62 crime scene call outs for KCSO,
- 138 crime scene call outs for SPD,
- evidence of 403 King County cases, 1,173 SPD cases and 182 Other Agency cases.

3. Results

The KCSO Latent Unit has the highest latent case hit rate of any AFIS system in the Western United States, averaging 31 to 35 percent since 1996. More than 3,480 potential suspects have been identified through latent searches for participating agencies during the past five years. Partially in response to the high success rate, requests to the Unit for latent print examination have increased an average of 418 cases per year during the past five years.

Table 4, AFIS Latent Hits, 1995-1999

AFIS HITS (Identifications)	1995	1996	1997	1998	1999	Total
King County including Contract Cities	391	350	348	769	389	2247
Other Suburban Police Agencies	181	138	167	428	319	1233
Seattle Police	314	297	297	204	217	1329
Total	886	785	812	1401	925	4809

All cases are searched against the King County Regional AFIS database and if still unsolved against Washington State Patrol, California Department of Justice and Western Identification System databases. Innovative and advanced latent detection and enhancement techniques have been developed by the King County Latent Unit. Many of these advanced processes are not available elsewhere. King County Latent examiners are available to assist suburban law enforcement agencies with fingerprint expertise and sophisticated detection equipment at major crime scene investigations. Evidence can also be brought to the fingerprint processing lab where latent examiners will use the latest chemical, optical, photographic, and digital enhancement processes to obtain hidden latent prints from the items of evidence.

In addition the KCSO Latent Unit has started processing evidence for some suburban jurisdictions at the Processing Lab currently located in Boeing field. Suburban agencies submit 31 percent of all evidence processed.

4. Benefits

King County Regional AFIS and Latent Lab system has been a valuable tool in helping police throughout King County identify and apprehend criminal suspects. Often an AFIS hit on one burglary has closed several other unsolved crimes in the community or led to solving of more serious crimes. With the upgrade of the AFIS computer and the availability of new technology such as digital enhancement, unit staff can help solve more crimes and reduce crime in the community.

E. Additional Print Taking

Much was done during the current levy period to close gaps in fingerprinting by beginning to capture prints from juveniles and adults who are arrested but are not booked into the main adult jail. AFIS staff now obtain fingerprints for virtually every person booked into the King County Detention Center, the Regional Justice Center, the Juvenile Detention Center, the North Rehabilitation Center and Work and Education Release.

Juvenile Detention -- In 1996, one half of a full time equivalent employee (FTE) was added to fingerprint individuals booked into Juvenile Detention. In addition, the Jail Identification unit sends Technicians to Juvenile Detention to fingerprint when possible to handle overflow.

Regional Justice Center -- When the RJC opened in April of 1997, eight AFIS identification technicians and one supervisor were added to staff the facility 24 hours a day, seven days a week. This level of staffing generally allowed for two technicians on two shifts and one technician on one shift. Since the opening, the RJC has experienced steady booking increases of 20 percent or more over each of those three years. Booking volumes were at 11,994 (9 months only) in 1997, rose to 19,836 in 1998, and increased again to 24,088 in 1999.

The staff at the RJC have consistently obtained 99.9 percent of the fingerprints throughout this period and worked hard to be an identification resource to any law enforcement agency using this facility. In addition to direct bookings, the RJC Technicians process the Sheriff's Cooperative Shuttle every weekday. Two shuttles bring inmates from outside King County to the RJC where they are printed before they are housed.

Eight Technicians and one Supervisor continue to handle all RJC fingerprinting, with occasional assistance from staff from the KCCF. Continued increases in RJC bookings from anticipated shifting of population from KCCF anticipated in the next few years, could require further reallocation of AFIS Identification Staff.

F. Latent Print Enhancements

With advancements in research and development in the science of fingerprints, the King County and SPD AFIS Latent Units have used various technology or equipment to enhance the quality of latent prints. The digital enhancement system has been used to scan a latent lift or a photograph of a latent into a personal computer, where the examiner enhances the image and traces out the ridges. The Alternate Light Source (ALS) and Cyanocraylate Vacuum Fuming Chamber (Cy-Vac) have been used to detect and develop latent prints effectively.

Each apparatus aids in locating and capturing the invisible latent prints. Together they aid in quickly capturing the image photographically, making better court demonstratives, and enhancing training by producing better visual aids.

Being able to capture and digitize the image allows the examiner to share the latent with other experts through out the world.

Capturing the latent takes more time than just a few years ago. Before the advent of sophisticated print processing, a latent examiner dusted the item with black powder and either got a latent or did not. Now latent examiners can use the Cy-Vac to chemically process the evidence and use the Alternate Light Source to visualize the image. The computer is then used with the Digital Enhancement System to remove the background, making images visible, which previously were undetectable. Images that previously were not of AFIS value can now be processed using AFIS.

The advantage of these tools and techniques is that they develop more and better quality latent images that result in bringing suspects to trial. The disadvantage to having more tools is it that it takes longer to complete a case.

Case History: A 1995 Kirkland rape/homicide investigation centered on faint blood transfer stains on the victim's bed sheet. The sheet was brought to the King County AFIS Latent Lab for processing. The success of developing latents on fabric is extremely difficult and rare. The sheet was treated with a chemical called amido black that reacts with protein in blood and multiple areas of handprints were developed. However, under magnification the minute details necessary for comparison were lost in the weave of the fabric. Using a digital enhancement system, the weave was significantly muted and the ridge details enhanced revealing identifiable latents. These matched prints from a suspect who was subsequently convicted of murder in the first degree.

The validity of the new digital enhancement technology in this case was challenged on appeal. The Washington State Court of Appeals affirmed the conviction, establishing for the first time in the country the validity of digital enhancement as evidence.

G. Reimbursement of Suburban Print Taking

Early in the levy period the Regional AFIS Advisory Committee decided that rather than reimburse suburban jails for existing print taking, it would direct that funding to increase the funds available to suburban agencies for Live Scan and other technology.

H. Implementation of AFIS 21

Originally anticipated to be installed in 1998, the new AFIS 21 system was delayed until 1999 while the vendor focused its resources on ensuring its 22 installed systems were Year 2000 compliant. King County's existing AFIS system also was not Year 2000 compliant, and a decision was made to upgrade to the new Year 2000 compliant AFIS 21 ahead of the Year 2000 deadline. King County AFIS technicians were able to complete the acceptance test and the 30-day parallel testing before year-end.

King County's new AFIS 21 system has been conditionally accepted by King County. All outstanding issues are expected to be resolved during the second quarter of 2000. Until all issues are resolved there may continue to be some duplication of effort to ensure system integrity. When the system is fully accepted, it will begin the one-year warranty period. Maintenance charges will begin when the warranty has expired.

I. Year 2000 Compliance

Unforeseen as an issue when the current levy was prepared in 1995 were the complications and costs associated with upgrading computer systems to make them Year 2000 compliant. For AFIS, this was an issue for both the existing AFIS computer as well as those under development for delivery by vendors in the late 1990s. Not only did it affect King County's schedule for upgrading its computer system, Year 2000 compliance consumed significant resources and focus of AFIS vendors and delayed delivery of the AFIS 21 system for its customers. In 1998, the vendor, NEC, informed King County that its existing AFIS computer would become obsolete and that AFIS 21 was not Year 2000 compliant. The AFIS program, at the direction of the AFIS Advisory Committee, determined that the best course of action would be to delay implementation of the AFIS 21 computer until it was guaranteed to be Year 2000 compliant. By November 4, 1999

we had received a letter from NEC with a guarantee that the AFIS 21 system would be Year 2000 compliant.

The system has been in production mode with no date-related problems. At this time we do not foresee any future date problems with this new system.

J. Implementation of Live Scan

It is the objective of the King County Regional AFIS System to implement Live Scan in the year 2000 by installation of 22 Live Scan workstations throughout King County. Workstations will be located at King County Correctional Facility, Regional Justice Center Adult Detention Facility, and the Juvenile Detention Facility. In addition there will be 16 remote sites throughout the suburban jurisdictions, and at King County Sheriff's Office Precincts. The remote sites will be at the following locations:

Precinct 2 (Kenmore)
Precinct 2 (Sammamish)
Precinct 3 (Maple Valley)
Precinct 4 (Burien)
Precinct 5 (Shoreline)

Auburn
Bellevue
Des Moines
Lake Forest Park
Kirkland
Tukwila
Federal Way
Issaquah
Kent
Seattle-Tacoma International Airport
Renton

Implementation of Live Scan was originally planned for 1998, but was delayed by the need to upgrade to the AFIS 21 system for the Year 2000. It was also delayed pending definition of the Type 2 record by Washington State Patrol. This record is the standard for interfacing King County Regional AFIS electronic print records with the Washington State patrol AFIS to allow electronic transmission and merging of demographic and charge information.

In addition, getting network connections for some of the suburban cities has been problematic. The AFIS Section is planning to hire a new network administrator this year.

In order to guarantee that NEC starts installing Live Scan equipment on September 1, 2000; King County Regional AFIS has requested that the Live Scan contract be completed by June 30, 2000. To keep to that schedule, Technical System Design for Live Scan must begin by mid-April, 2000. King County Regional AFIS has requested that NEC provide a firm commitment to completing the Live Scan Project in a timely manner. The goal of King County Regional AFIS and the AFIS Advisory Committee is to have Live Scan units installed during September and October of this year.

V. Options Explored for the Fourth Levy

A. Technology

The AFIS Advisory Committee considered the following technology options for the next levy period:

1. Continued Implementation of Live Scan

After implementation in 2000 of 22 Live Scan machines and associated technology infrastructure, there will remain the need for seven to 12 additional machines to make the technology readily available to all King County police agencies.

Cost estimate: $498,400 to $1,000,000

2. Reestablishment of a Fingerprint Technology Enhancement Fund

The current levy includes a technology Enhancement Fund, which has been allocated primarily to purchase and implement Live Scan and fingerprint card scanners and associated equipment.

This dedicated fund line could be implemented as follows:

Suburban agencies, Sheriff's contract cities, Seattle and King County would apply to the AFIS Advisory Committee, which would determine which projects would receive funds. Likely projects could include:

- Further expansion of the Live Scan program to reach remaining contract cities, Seattle, and suburban agencies within King County.
- Fingerprint Card Scanners and PCs could be obtained for smaller jurisdictions to send their inked fingerprint cards to the KC Regional AFIS Program in a real time environment.

However, any type of technology or equipment could be requested as long as the agency could prove that the technology would enhance the number or quality of known prints for the Ten Print data base or would improve the quality of latent prints being submitted for AFIS analysis.

Cost estimate: Range from $150,000 to $300,000 per year.

3. Automated Palm Print Identification System

The purchase and staffing of an Automated Palm Print Identification System would provide a significant expansion of AFIS capabilities. The AFIS system can search fingerprints only, because its database consists only of the first joint of fingers. Palm prints cannot be searched in the AFIS computer. However, about 35 to 40% of incoming cases to the Lab contain palm prints. Purchase of an Automated Palm print Identification System would allow all the unsolved cases from prior years with palm prints. New cases could be compared with approximately 400,000 palm prints on file within minutes.

Case Example: Several years ago, SPD had a murder case, in which palm prints only were recovered on the murder weapon. There were no suspects and the case remained unsolved. Later, SPD had another case in which both palm prints and fingerprints were obtained from the crime scene. A fingerprint was matched on AFIS, and the known suspect's palms were then positively matched by technicians with the latent palm prints from both cases.

Cost estimate: $5,000,000

Palmprint System	$1,750,000
Power files for palmprint cards	$90,000
9 Examiners	$1,471,905
8 Identification Technicians	$1,022,160
4 Clerical ASII	$360,300
Benefits	$394,632
Total cost for 3 years	$5,088,997

4. RAPID Single Print Scan in Officers' Cars (remote mobile handheld devices)

Patrol Officers and Deputies often stop individuals whose identity they question. It is time consuming to take every subject to a precinct or jail to be fingerprinted and identified. The RAPID system allows scanning either one or two fingerprints which is sent using wireless communication to AFIS for a search of the database.

Cost estimate: Unknown. San Francisco is considering 100 units for $1.3 million.

B. Service Gaps

1. Fingerprinting at Juvenile Court

While 98% of youths booked into the Juvenile Detention facility are fingerprinted, approximately 6,500 youths who are never booked into detention before adjudication may not be fingerprinted. **These youths represent more fingerprints than are currently being captured at Juvenile Detention.**

The AFIS Advisory Committee believes that this gap could be closed by adding two FTEs (employees) and one additional Live Scan station at the Juvenile Court Division of Superior Court.

Cost estimate: $557,677 (Cost of Live Scan Unit included in Live Scan estimate above.)

C. Workload Trends and Implications for System Staffing

1. Jail Identification Unit

Recent trends for bookings at Adult and Juvenile Detention have been in the range of 1.5 percent annually. The Juvenile Justice Operational Master Plan estimates an average annual Juvenile Detention booking increase of 1.34 percent per year during the next five years. One additional Jail Identification Technician is expected to be needed beginning

in 2001 to handle increased workload and Live Scan training.

Cost estimate: $280,838

2. Ten Print Units

The KCSO AFIS Ten Print Unit processed nearly 65,000 prints in 1999, which represents more than a 28 percent increase over 1995. The implementation of Live Scan is expected to cause a significant increase in prints submitted for Ten Print analysis in 2001 and 2002. Applicant agencies estimated that up to an additional 14,307 prints would be submitted the first year of Live Scan implementation.

Ten Print staffing needs are a function of the number of the incoming prints for processing and the number of prints each staff member can process. Live Scan is expected to increase the need for staffing initially in the KCSO Ten Print Unit, but to increase the number of prints each staff member can process over the long term.

The Ten Print Units' staffing is based upon a workload model developed in preparation for the current levy. Each job is tracked and assigned a time value, which in turn translates into FTE hours. The model has been validated and adjusted during the levy period and has proved reliable in estimating staffing needs.

The sources for incoming fingerprint analyses are jail bookings, suburban submittals, and applicant and juvenile detention cards. For the 2001 to 2005 levy it is estimated that jail booking prints and suburban mail-in card submittals will grow at approximately 3 percent, which is slightly less than the historical average over the last five years.

Law enforcement agencies and other units allocated Live Scan units in 2000 estimated they would submit 29,999 prints with Live Scan the first year. Those agencies are expected to submit 14,693 prints using traditional methods in 2000. Due to the time involved in training and transitioning to Live Scan, actual receipts were calculated using 75% of this figure, split over the first two years. Those estimates are reflected in the tables below:

Table 5, Historical and Projected Ten Print Inquiries

Agency	1996	1997	1998	1999	2000[6]	Total
KCSO[7]	27,520	26,106	28,395	28,388	29,523	139,932
Suburban Agencies[8]	25,888	33,044	30,712	33,943	35,301	158,888
SPD	31,024	30,115	30,908	27,916	28,215	148,178
Total	84,432	89,265	90,015	90,247	93,039	446,998

Agency	2001	2002	2003	2004	2005	Total.
KCSO[9]	28,087	28,930	29,798	30,692	31,612	149,119
Suburban Agencies[10]	43,601	48,123	49,566	51,054	52,585	244,929
SPD	28,497	28,781	29,068	29,358	29,651	145,355
Total	100,185	105,834	108,432	111,103	113,849	539,403

The AFIS 2000 Subcommittee analyzed several potential staffing scenarios to handle increased print submissions to the KCSO AFIS Ten Print Unit. Low range estimates of workload would be expected to generate the need for an additional three Identification Technicians and three Administrative Specialists over the course of the levy period. However, if new print submissions increase at the full rate estimated by the agencies or print process efficiency goals cannot be achieved, there may be a need for up to four additional Identification Technicians and four Administrative Specialists over the course of the levy.

SPD Ten Print Unit expects print submissions to remain relatively constant during the course of the levy and is not expected to need additional staff.

Cost estimate: $1,310,170 to $1,727,614

3. Latent Units

KCSO Latent Print Unit-- Latent print submissions to KCSO Latent Print Unit have increased significantly during the current levy period, partially in response to the reduction of backlogs made possible by addition and training latent print examiners completed in 1998 and 1999.

Early in the current levy period demand for latent processing and identification overwhelmed available staffing. During 1996 through 1998 a latent case submitted for

[6] 2000 Data are estimated

[7] King County Sheriff's Office cases excludes Contract Cities

[8] Suburban Agencies includes Sheriff's Office Contract Cities

[9] King County Sheriff's Office cases excludes Contract Cities

[10] Suburban Agencies includes Sheriff's Office Contract Cities

analysis had to wait in line behind previously submitted cases for up to a year before work could be started on the case. During the next two years, six latent examiners were hired and trained. However, hiring new latent examiners is not a simple fix for backlog reduction, because there is exists a national shortage of qualified examiners. New latent examiners must undergo an 18-month to two-year training period before they can become qualified to work on cases and testify in court. Existing latent examiners must be assigned to train new staff, which takes away time they would otherwise be working latent cases. Thus backlogs that exist before hiring tend to get worse during the period when new examiners are trained. By 1998, the King County Latent Unit was fully staffed with examiners, and in January 1999, the latent case backlog was finally eliminated. Now work begins on new latent cases within 24 hours of receipt of the case.

During the backlog period, suburban agency training was reduced to 142 hours because the latent examiners were busy working cases. In spite of the limited training, suburban agency latent case submissions have increased by 30 percent during the levy period. With the backlog now reduced, training for suburban agencies is being increased. Increased training may result in an even greater increase in latent case submissions.

When backlogs exist, police may tend to submit prints only for more serious person crimes. However, when quick turnaround is available, more police may spend the time and effort to lift and submit prints from more property crimes.

Given the importance of latent print processing to successful investigations and the dynamic relationship between submissions, staffing and productivity, making accurate predictions about future workload trends is both very challenging and important. Projecting the annual average increase in cases during the 1996 to 1999 period, would suggest that workload for the KCSO Latent Unit would increase by 36 percent between 1999 and 2005.

However, declining crime rates and other factors suggest that a significantly lower rate of increase might be expected during the levy period. If only the past three years of cases are projected using other statistical modeling techniques, unit submissions might be expected to increase as little as 16 percent between 1999 and 2005.

At the higher estimates an additional five Latent Examiners and 2 Administrative Specialists would be needed over the course of the next five years. At lower estimates two Latent Examiners and one Administrative Specialist would be needed over the course of the next five years.

SPD Latent Print Unit – Activity for the SPD Latent Print Unit has been essentially constant during the levy period. During the next five years, that unit is expected to have minor increases in submissions as a result of nearly full staffing at SPD and recent officer training in print lifting techniques and AFIS capabilities. One additional Latent Print examiner is expected to be needed over the course of the next five years.

Cost estimate: $770,000 to $1,500,000

D. Levy Rate

1. Recent Changes Affecting Property Tax Levies

With the passage of Initiative 695, significant changes have been made in the way governments collect and plan for property tax levy funds. Currently, the Initiative puts a cap on the yield of tax revenue the county can expect to collect from property levies. So, while overall property values may rise, the effective rate the county is able to charge must drop in order to hold yield constant. The only increased revenue the county can expect to collect is the value of new construction that takes place on property. This change already has affected the AFIS levy rate. Beginning in 2000, King County has assessed a rate of 6.430 cents per $1,000 AV, a 3 percent decrease from the rate collected in 1996 through 1999.

2. Status Quo Base

Using the status quo budget methodology as described below, a levy rate of 5.357 cents per $1,000 valuation would be required to fund the AFIS program as it now operates, with no ending fund balance.

The following table summarizes the cost of maintaining the King County Regional AFIS program at 2000 levels for years 2001 through 2005.

Table 6, Costs to Maintain Status Quo Services

Item	2001	Five Year Total	Levy Rate (per $1,000)
Salary and Benefits	$4,683,248	$24,864,001	2.650 cents
Seattle AFIS Unit	$2,202,140	$11,691,460	1.247 cents
Maintenance & Other Services	$878,181	$4,662,384	0.497 cents
Supplies	$73,383	$389,602	0.042 cents
System and Equipment	$904,162	$4,800,319	0.512 cents
Internal Services	$666,436	$3,0538,192	0.377 cents
Reserves	$57,213	$303,752	0.032 cents
Total	**$9,464,763**	**$50,249,711**	**5.357 cents**

VI. Committee Recommendations

The AFIS Advisory Committee believes the options identified below reflect conservative assumptions about revenues and workload, while supporting the goals and objectives outlined for the AFIS program. While the Committee understands that using low range assumptions for workload increases carries some risk that insufficient staff will be available to handle incoming work, it also believes that actual revenue may be greater than assumed. If workload in any given AFIS unit grows at rates significantly higher than projected, the AFIS Advisory Committee and King County Regional AFIS

management would reallocate resources within the system to best meet the needs of police agencies.

The following reflects the AFIS Advisory Committee's recommendations for the next levy period. Identified costs would be in addition to the Status Quo operations outlined in the previous section.

1. Five-year levy, subject to restrictions on growth as required by Initiative 695.

Although the courts have yet to determine what exact effect on property tax measures are required by the Initiative, the Committee recommends an approach in line with Initiative 695 be followed. Using this approach, the rate would be set at an initial level, which would be expected to drop gradually during the course of the levy period. The amount of the drop in rate would be determined by the previous year's yield and the amount of new construction added the previous year to the total Assessed Valuation.

2. Staffing additions for low range estimates of increased workload

The Committee recommends that $2,359,822 be allocated to workload driving staffing additions of 11 FTE, as follows:

Unit	FTE
KCSO Jail Identification Unit	1
KCSO Ten Print Unit	6
KCSO Latent Print Unit	3
SPD Latent Print Unit	1

3. Completion of Live Scan

The Regional AFIS Advisory Committee recommends that $498,400 be allocated to establishment of seven additional Live Scan units beyond those funded for 2000. The Committee believes placement in the following areas or locations would provide reasonable access for all law enforcement agencies in King County[11]:

Juvenile Court	North Bend
Woodinville/Bothell	Redmond
Enumclaw/Black Diamond	SPD North and West Precinct

[11] Final allocation of Live Scan units would be subject to application by potential recipient agencies and approval by the Regional AFIS Advisory Committee.

4. Establishment of print taking at Juvenile Court

The Committee strongly recommends addition of $557,677 and two FTE to begin taking prints at Juvenile Court. This would close a significant gap in print taking.

5. Target ending fund balance of $800,000

This fund balance would equal about 7.5 percent of the average annual AFIS budget, which the Committee believes is appropriate for a fund and operation of this nature and size.

6. Recommended Rate

Combining the status quo program level with the recommended enhancements brings the overall AFIS levy rate to 5.836 cents per $1,000. The levy rate would be expected to drop gradually during the course of the levy to approximately 5.005 cents per $1,000. The initial rate is a 12 percent reduction from the adopted rate of 6.650 cents per $1,000 and a 9 percent reduction from the currently assessed rate of 6.430 cents per $1,000 AV. The expected ending rate represents a reduction of 25 percent from the previously adopted rate and a 22 percent reduction from the current rate.

The cost and rate impact of the recommended package of items is summarized in the following tables:

Table 7, Cost and Rate Impact of Recommended Additions

Item	Five Year Total	2001 Levy Rate / cents per $1,000	2005 Levy Rate / cents per $1,000
Status Quo Services	$50,249,711	5.357	4.594
Additional 7 Live-Scan Units	$498,400	0.058	0.050
Juvenile Court Print Taking	$557,677	0.062	0.053
Workload Driven Additions	$2,359,822	0.269	0.231
Target Fund Balance	$800,000	0.090	0.077
Total	$54,465,610	5.836	5.005

Cost		2001	2002	2003	2004	2005
	Status Quo Projection	9,464,763	9,748,707	10,041,166	10,342,401	10,652,674
Live Scan	**Seven Units**	210,000	288,400			
New Service	**Juvenile Court Prints**	108,288	107,416	110,639	113,958	117,377
Workload	**New salary**	214,300	50,930	115,900	43,473	55,653
	New benefits	75,005	17,826	40,565	15,215	19,479
	One-times	42,000	4,120	12,731	19,669	4,502
	Previously added	-	244,276	322,423	493,254	568,501
	Total	**10,114,356**	**10,461,675**	**10,643,423**	**11,027,971**	**11,418,185**

7. Process to Establish Permanent Funding Source

While the AFIS Advisory Committee believes a five-year levy is the most appropriate funding mechanism at this time, it also urges the County, Cities and State to establish a process and work collaboratively during the coming years to provide permanent funding for this vital service. Committee members believe AFIS is a vital regional public safety service that should not be jeopardized by the potential failure of a property tax measure. Accordingly, the members also are concerned that any proposed permanent funding source be sufficient to support true regional service delivery.

VII. Appendix A – AFIS Advisory Committee and AFIS 2000 Subcommittee Members

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VIII. Appendix B – Financial Plan

A. Addition Detail

Workload Driven Staffing

Unit	Item	Year	Salary	Benefits	One-Time
Jail ID	ID Tech	2001	38,625	13,519	4,000
Ten Print	ID Tech	2001	38,625	13,519	4,000
Ten Print	ID Tech	2001	38,625	13,519	4,000
Ten Print	Admin Spec 2	2001	29,900	10,465	4,000
Ten Print	Admin Spec 2	2001	29,900	10,465	4,000
Ten Print	1 yr TLT-ID Tech	2001	38,625	13,519	4,000
Latent Lab	additional equipment	2001			18,000
		2001 total	214,300	75,005	42,000
Latent Lab	latent print examiner	2002	50,930	17,826	4,120
Ten Print	Admin Spec 2	2003	31,721	11,102	4,244
Latent Lab	Admin Spec 2	2003	31,721	11,102	4,244
SPD Latent Lab	latent print examiner	2003	52,458	18,360	4,244
		2003 total	115,900	40,565	12,731
Latent Lab	additional equipment	2004	-	-	19,669
Ten Print	ID Tech	2004	43,473	15,215	-
		2004 total	43,473	15,215	19,669
Latent Lab	latent print examiner	2005	55,653	19,479	4,502

New Juvenile Court Print Taking

Jail ID	ID Tech	2001	38,625	13,519	4,000
Jail ID	ID Tech	2001	38,625	13,519	
	additional 2001	**subtotal**	**77,250**	**27,038**	**4,000**

Cost		2001	2002	2003	2004	2005
	Status Quo Projection	9,464,763	9,748,707	10,041,166	10,342,401	10,652,674
Live Scan	**7 Units**	210,000	288,400			
New Service	**Juvenile Court Prints**	108,288	107,416	110,639	113,958	117,377
Workload	**New salary**	214,300	50,930	115,900	43,473	55,653
	New benefits	75,005	17,826	40,565	15,215	19,479
	One-times	42,000	4,120	12,731	19,669	4,502
	Previously added	-	244,276	322,423	493,254	568,501
	Total	**10,114,356**	**10,461,675**	**10,643,423**	**11,027,971**	**11,418,185**

Table 8, 2001-2005 AFIS Levy Financial Plan

	2000	2001	2002	2003	2004	2005
BEGINNING FUND BALANCE	$2,403,632	$2,403,632	$2,448,685	$2,277,673	$2,051,408	$1,562,282
REVENUES						
Property Taxes		$10,159,408	$10,290,664	$10,417,158	$10,538,845	$10,655,903
Interest Income						
TOTAL REVENUES		$10,159,408	$10,290,664	$10,417,158	$10,538,845	$10,655,903
EXPENDITURES						
Status Quo		$9,464,763	$9,748,707	$10,041,166	$10,342,401	$10,652,674
Workload Increases		$331,305	$317,152	$491,619	$571,612	$648,135
Complete Live Scan		$210,000	$288,400			
Juvenile Court Print Taking		$108,288	$107,416	$110,639	$113,958	$117,377
TOTAL EXPENDITURES		$(10,114,356)	$(10,461,675)	$(10,643,423)	$(11,027,971)	$(11,418,185)
ENDING FUND BALANCE	$2,403,632	$2,448,685	$2,277,673	$2,051,408	$1,562,282	$800,000
AFIS Levy Rate	0.06426	0.05836	0.05622	0.05408	0.05203	0.05005
Cost per $200,000 AV Home	12.85	11.67	11.24	11.24	10.40	10.01

IX. Assumptions and Methodology

In building the costing models for the 2000 AFIS levy we first started with where the system currently stands. To build a status quo model, all non-ongoing expenses were backed out. These include one-time equipment purchases, contract services that will be completed, and implemented technology systems. Once the overall budget was reduced to strictly ongoing expenses, a 3 percent inflation rate was used across the board for all five years of the plan. The salaries for new positions were drawn from mid-step current County rates and inflated at 3 percent from 2000. Benefits are a straight 35 percent of salary.

On the revenue side of the picture, we assumed that I-695 effectively caps the yield of revenues the levy can bring in. Additional revenue over and above the 2001 figure can only come from the increase value of new construction. Because the amount of new construction varies greatly from year to year, we assumed an annual amount of $2,250,000,000 county wide, and did not adjust for inflation.

Detailed staffing models were originally created for both the King County and Seattle AFIS units for the 1995 AFIS Levy. The models are tied to the projected number of people booked into both the King County Jails, the number of latent print cases, and during the life of this levy, the amount of Ten Print analysis requests that come in from outside police agencies. The greatest difficulty experienced in updating these models was in estimating the increased demand upon the Ten Print Unit as a result of full implementation of the Live Scan system. Estimates ranged as high as 40,000 additional requests of the Ten Print Unit. Given the extreme difficulty in accurately projecting these workload increases, the decision was made to tie them to take a mid-range estimate of 20,000 additional requests, and revisit this issue after more data is available.